

WHAT IS CLAIMED IS:

1. A toothbrush comprising a handle, a cleaning head attached to said handle, and a mechanical vibratory device which causes the cleaning head to vibrate, said mechanical vibratory device located in the cleaning head or in a region adjacent to the cleaning head
5 and operatively connected to an electric power source, said cleaning head having an outer surface, said cleaning head including a frame, a resilient membrane secured across said frame and movable in a direction toward and away from said outer surface, said resilient membrane defining a cleaning field, a plurality of cleaning/treating elements mounted to said membrane in said cleaning field, at least some of said cleaning/treating elements
10 having physical characteristics which differ from other of said cleaning/treating elements.
2. The toothbrush according to claim 1, wherein said cleaning/treating elements include bristles disposed at a non-perpendicular angle to said membrane.
3. The toothbrush according to claim 1, wherein said cleaning/treating elements include angled bristles arranged in a crisscross pattern.
- 15 4. The toothbrush according to claim 1, wherein said cleaning/treating elements include multi-level bristles.
5. The toothbrush according to claim 1, wherein said cleaning/treating elements include bristle walls.
6. The toothbrush according to claim 1, wherein said cleaning/treating elements
20 include bristles having pointed outer ends.
7. The toothbrush according to claim 1, wherein said cleaning/treating elements include bristles selected from the group consisting of angled bristles, crisscross bristles, multi-level bristles, bristle walls, pointed bristle tufts and combinations thereof.
8. The toothbrush according to claim 1, wherein said cleaning/treating elements
25 include elastomeric fingers.

9. The toothbrush according to claim 1, wherein said cleaning/treating elements include elastomeric walls.
10. The toothbrush according to claim 1, further comprising a tongue cleaning structure mounted to said head.
- 5 11. The toothbrush according to claim 1, further comprising elastomeric cups.
12. A toothbrush comprising:
an elongated member having a head at one end and a handle at the other end; and
a mechanical vibratory device which causes the head to vibrate, said mechanical vibratory device located in the head or in a region adjacent to the cleaning head and
10 operatively connected to an electric power source,
wherein said head is comprised of a face with a peripheral portion about its exterior and an internal portion adjacent thereto, wherein said peripheral portion is comprised of a plurality of peripheral bristle tufts extending therefrom, and wherein said internal portion is comprised of a plurality of bristle bars extending therefrom.
- 15 13. The toothbrush according to claim 12, wherein the peripheral bristle tufts and bristle bars have a Buttress Factor of from about 0.6 to about 0.75.
14. The toothbrush according to claim 12, wherein the peripheral bristle tufts extend from about 9 mm to 13 mm in height above the face.
15. The toothbrush according to claim 14, wherein the bristle bars extend at least 50%
20 of the height above the face of the peripheral bristle tufts.
16. The toothbrush according to claim 12, wherein the width of the bristle bars is at least about 1.0 mm.
17. The toothbrush according to claim 12, wherein the length of the intermediate bristle bars and spacing between the bristle bars and adjacent peripheral tufts is such that
25 the bristle bars will provide support to the peripheral bristle tufts when the peripheral

bristle tufts are deflected toward the bristle bars at any angle up to 20 degrees from the perpendicular with respect to the toothbrush face.

18. The toothbrush according to claim 12, wherein said bristle tufts are generally symmetrical in cross-section, with a cross-sectional diameter or larger diameter of from
5 about 1.0 mm to about 2.0 mm.

19. A toothbrush comprising a handle, a cleaning head attached to said handle, and a mechanical vibratory device which causes the cleaning head to vibrate, said cleaning head having an outer surface, and a plurality of cleaning/treating elements mounted to said outer surface, wherein at least some of said cleaning/treating elements having physical
10 characteristics which differ from other of said cleaning/treating elements.

20. The toothbrush according to claim 19, wherein said cleaning/treating elements are comprised of bristle elements, non-bristle elements or combinations thereof.

21. The toothbrush according to claim 19, wherein said bristle elements comprise bristles disposed at a non-perpendicular angle to said outer surface.

15 22. The toothbrush according to claim 19, wherein said bristle elements include angled bristles arranged in a crisscross pattern.

23. The toothbrush according to claim 19, wherein said bristle elements include multi-level bristles.

24. The toothbrush according to claim 19, wherein said bristle elements include bristle
20 walls.

25. The toothbrush according to claim 19, wherein said bristle elements include bristles having pointed outer ends.

26. The toothbrush according to claim 19, wherein said bristle elements are selected from the group consisting of angled bristles, crisscross bristles, multi-level bristles, bristle
25 walls, pointed bristle tufts and combinations thereof.

27. The toothbrush according to claim 19, wherein said non-bristle elements comprise a tongue-cleaning structure, elastomeric fingers, elastomeric walls, prophylactic cups or combinations thereof.

28. The toothbrush according to claim 19, wherein said mechanical vibratory device is
5 located in the cleaning head or in a region adjacent said cleaning head and operatively connected to an electric power source.

29. The toothbrush according to claim 19, further comprising a vibration-dampening element.